1.

2.4.1.a

$x(n) = x(n-1) + 5$, $n > 1$, $x(1) = 0$.

Ta có $x(n) = x(n-1) + 5$

$= [x(n-2) + 5] + 5 = x(n-2) + 5.2$

$= [x(n-3) + 5] + 5.2$

$= x(n-3) + 5.3$

$= \dots$

$= x(n-i) + 5i$

$= x(1) + 5.(n-1) = 5(n-1)$

2.4.1.c

$x(n) = 3x.x(n-1) + n$, $n > 0$, $x(0) = 0$

Ta có $x(n) = x(n-1) + n$

$= [x(n-2) + (n-1)] + n$

$= x(n-2) + (n-1) + n$

$= [x(n-3) + (n-2)] + (n-1) + n$

$= x(n-3) + (n-2) + (n-1) + n$

$= \dots$

$= x(n-i) + (n-i+1) + \dots + n$

$= x(0) + 1 + 2 + \dots + n = \frac{n(n+1)}{2}$

9.

Ta có $T(n)$: $\begin{cases} 1 \\ T(n-1)+1 \end{cases}$

$$T(n) = T(n-1) + 1, \quad T(0) = 1$$

Ta có $T(n)$: $T(n-1)+1 = [T(n-2)+1]+1$

$= T(n-2)+2 = \dots$

$= T(n-i)+i$

$= T(0) + n$

$= 1 + n$